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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,731

02/20/2004

Takashi Sato

118784

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25944

7590

12/11/2006

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

DHARIA, PRABODH M

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/781,731

Applicant(s)

SATO, TAKASHI

Examiner

Prabodh M. Dharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03-11-04, 10-11-05, 01-31-06</u> | 6) <input type="checkbox"/> Other: _____  |

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 03-11-04 and 10-11-05, 31-01-06 were filed after the filing date of the application on 02-20-04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because the Line 2 of the abstract after word "communication device" the phrase "such as" is used. Correction is required. See MPEP § 608.01(b).

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***Response to Amendment***

5. The amendment filed 03-11-2004 does not introduces any new matter into the disclosure. The added material is supported by the original disclosure as it only corrects the English of claim language and abstract. Please all the replies and correspondence should be addressed to examiner's art unit 2629.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-8,11,12,16-19,23 and 27-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Empedocles et al.

Regarding Claim 1, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit(page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126,

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page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).

Regarding Claim 2, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit(page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).

Regarding Claim 3, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit(page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph

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330).

Regarding Claim 4, Empedocles et al. teaches the radio communication device having a function of storing information concerning the corresponding display device (page 27, paragraph 298-304).

Regarding Claim 5, Empedocles et al. teaches the radio communication device having at least one of a function of writing information in a radio communication device other than the corresponding display device and a function of reading information from the radio (page 1, paragraph 10) communication device other than the corresponding display device (page 27, paragraphs 298-303, page 1, paragraph 10, page 26,27 paragraph 289).

Regarding Claim 6, Empedocles et al. teaches the radio communication device having a function of storing at least one of information written in a radio communication device other than the corresponding display device and information of the radio communication device other than the corresponding display device (page 27, paragraphs 298-303).

Regarding Claim 7, Empedocles et al. teaches the communication integrated-circuit unit mounted on the substrate (page 7, paragraph 118-120, page 127, paragraphs 298-303).

Regarding Claim 8, Empedocles et al. teaches the communication integrated-circuit unit and the antenna electrically connected to each other through the conductor formed in the same

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layer as the conductor that includes the display unit or the conductors that include the display-unit-driving wiring lines (page 6,7, paragraphs 115-120, page 8, paragraph 126, page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).

Regarding Claim 11, Empedocles et al. teaches the communication integrated-circuit unit includes of a plurality of semiconductor elements formed on the substrate (page 2, paragraphs 19-22).

Regarding Claim 12, Empedocles et al. teaches the plurality of semiconductor elements that include the communication integrated circuit has the same structure as another semiconductor element formed on the substrate (page 2, paragraphs 19-22, page 6,7, paragraphs 115-120, page 8, paragraph 126, page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).

Regarding Claim 16, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-

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driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).

Regarding Claim 17, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120).

Regarding Claim 18, Empedocles et al. teaches a charging unit electrically connected to the antenna of the radio communication device through a rectifying unit to control the flow of the current in one direction (page 35, paragraph 388-392, rectifiers are switches and Empedocles teaches the switches/relays that gate current flow) the antenna is used as an antenna to charge power into the charging unit from the outside using electromagnetic induction (page 2,3, paragraphs 22-28, Empedocles teaches antenna has inductor and capacitor as a tuner. It is well known in the art tuner are connected to voltage device to charge received signal and generate appropriate voltage drive or current drive to recognize the information embedded in the signal).

Regarding Claim 19, Empedocles et al. teaches another apparatus excluding the display device electrically connected to the charging unit, the other apparatus driven by the power charged in the charging unit (page 35, paragraphs 388-392 Empedocles teaches the other apparatus is sound device and antenna receiving sound signal has inductor and capacitor as a tuner. It is well known in the art tuner are connected to voltage device to charge received signal



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and generate appropriate voltage drive or current drive to recognize the information embedded in the signal).

Regarding Claim 23, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); the display device displaying at least one of the information written in a radio communication device other than the corresponding display device and the information read from the radio communication device other than the corresponding display device (page 27, Paragraphs 298-302, pages 29, 30, paragraph 330).

Regarding Claim 27, Empedocles et al. teaches the radio communication device other than the corresponding display device reading information concerning the corresponding electronic apparatus from the radio communication device and writing information concerning the corresponding electronic apparatus in the radio communication device as data (page 27, paragraphs 298-303).

Regarding Claim 28, Empedocles et al. teaches the radio communication device driven by radio waves input to the antenna from the outside (page 27, paragraphs 298-303).

Regarding Claim 29, Empedocles et al. teaches a power source unit electrically connected to the radio communication device, the radio communication device being driven by the power

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of the power source unit (page 26, paragraphs 279-288).

Regarding Claim 30, Empedocles et al. teaches the information concerning the corresponding electronic apparatus being rewritten in the radio communication device as data (page 26, paragraphs 279-288, page 27, paragraphs 292-297).

Regarding Claim 31, Empedocles et al. teaches the radio communication device includes a writing unit to write information concerning the corresponding electronic apparatus as data, and a rewritable region and a non-rewritable region are provided in the writing unit (page 26, paragraphs 279-288, page 27, paragraphs 292-297, page 27, paragraphs 298-304).

Regarding Claim 32, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).and information concerning the corresponding electronic apparatus being written in the radio communication device as data (page 26, paragraphs 279-288, page 27, paragraphs 292-

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297).

Regarding Claim 33, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph 330).and information concerning the corresponding electronic apparatus being written in the radio communication device as data (page 26, paragraphs 279-288, page 27, paragraphs 292-304).

Regarding Claim 34, Empedocles et al. teaches a display device (page 6, paragraph 115), comprising: at least one substrate provided with a display unit (page 7, paragraph 120) and display-unit-driving wiring lines (page 7, paragraph 120); and a radio communication device having a communication integrated-circuit unit and an antenna, at least a part of the antenna formed on the substrate (page 7, paragraph 120) and formed of a conductor formed in the same layer as a conductor that includes the display unit or conductors that include the display-unit-driving wiring lines (page 7, paragraph 120, page 8, paragraph 126, , page 8, paragraph 126, page 11, paragraph 147, page 26, paragraph 279, page 27, paragraph 298 pages 29,30, paragraph

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330).and information concerning the corresponding electronic apparatus being written in the radio communication device as data (page 26, paragraphs 279-288, page 27, paragraphs 292-304).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13-15,20-22 and 24-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Empedocles et al. as applied to claims 1-8,11,12,16-19,23 and 27-34 are above, and further in view of Jacobsen et al. (US 6,863,219 B1).

Regarding Claim 9,10,13-15, 20-22 and 24-26 Empedocles et al. fails to recite or disclose at least a part of the antenna formed on the substrate in a region excluding the display unit and an electronic apparatus, comprising: a first display device and a second display device, the second display device being the display device according to claim 1 and provided on the surface opposite to the surface on which the first display device is provided;

However, Jacobson et al. teaches an external substrate for driving the display unit electrically connected to the substrate and a conductor provided on the external substrate electrically connected to the antenna formed on the substrate so that the conductor on the external substrate and the antenna on the substrate include an entire antenna, and the

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communication integrated-circuit unit is mounted on the external substrate (Col. 4, Lines 35-47, Col. 6, Line 65 to Col. 7, Line 9, Col. 7, Line 35 to Col. 8, Line 12); the external substrate including of a plurality of external substrates, and the communication integrated-circuit unit is mounted on one of the plurality of external substrates (Col. 4, Lines 35-47, Col. 6, Line 65 to Col. 7, Line 9, Col. 7, Line 35 to Col. 8, Line 12). Jacobson et al. teaches at least a part of the antenna formed on the substrate in a region excluding the display unit (Col. 4, Lines 35-47, Col. 6, Line 65 to Col. 7, Line 9, Col. 7, Line 35 to Col. 8, Line 12); the conductor formed above the antenna on the substrate to include the corresponding display device does not overlap the antenna in plan view (Col. 4, Lines 35-47, Col. 6, Line 65 to Col. 7, Line 9, Col. 7, Line 35 to Col. 8, Line 12). at least a part of the antenna formed along one peripheral edge of the substrate (see figure 11 Col. 7, Lines 35-50 It is obvious to avoid the high frequency noise the antenna receiver and transmitters are kept away from display drivers specifically in a corner); Jacobson et al. teaches an electronic apparatus, comprising: a first display device and a second display device, the second display device being the display device according to claim 1 and provided on the surface opposite to the surface on which the first display device is provided (Col. 8, Lines 13-25); the first display device displaying at least one of information written in a radio communication device other than the corresponding display device by the second display device and information read from the radio communication device other than the corresponding display device by the second display device (Col. 8, Lines 13-25); the first display device storing and displaying at least one of information written in a radio communication device other than the corresponding display device by the second display device and information read from the radio communication device other than the corresponding display device by the second display device

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(Col. 8, Lines 13-25, Col. 7, Lines 29-31); the display device storing and displaying at least one of information written in a radio communication device other than the corresponding display device and information read from the radio communication device other than the corresponding display device (Col. 8, Lines 13-25, Col. 7, Lines 29-31); at least a part of one surface and the other surface of the display device exposed to the outside (Col. 5, Line 65 to Col. 6, Line 2, Col. 8, Lines 13-27, see figure 6e) and the display device being a display device capable of displaying images on any of the one surface and the other surface of the display device (Col. 5, Line 65 to Col. 6, Line 2, Col. 8, Lines 13-27).

The reason to combine is Jacobson et al. teaches micro electronic assembly such as smart card include integrated circuits with antenna and dual displays and the antenna formed on the substrate in a region excluding the display unit (Col. 1, Lines 8-15, Col. 6, Line 65 to Col. 7, Line 9, Col. 8, Line 13-27).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Jacobson et al. in teaching of Empedocles et al. to be able to have dual display unit smart card with built in antennas and interconnect wiring power and ground leads on one of the substrate.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gioscia et al. (US 6,850,780 B1) Compact palmtop computer system and wireless telephone with foldable dual-sided display.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668.

The examiner can normally be reached on M-F 8AM to 5PM.

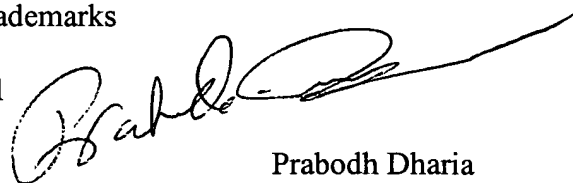
12. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

A handwritten signature in black ink, appearing to read 'Prabodh Dharia', is written over a horizontal line.

Prabodh Dharia

Partial Signatory Program Authority

AU2629

December 06, 2006